

# The Human Sciences Research Council's Virtual Library as an Information Hub which ultimately drives the creation of new knowledge.

Mark Douglas Frier

*Human Sciences Research Council (HSRC)*, [mfrier@hsrc.ac.za](mailto:mfrier@hsrc.ac.za)

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**The Human Sciences Research Council's Virtual Library as an Information Hub which ultimately drives the creation of new knowledge.**

**Abstract:**

One of South Africa's premier research councils, the HSRC (Human Sciences Research Council) has been actively engaging with its researchers in a virtual space for more than a decade. The nature of the HSRC's research business model has dictated a footprint which acts as research hubs across South Africa and involving Southern Africa as well. These research hubs are a fundamental inclusion in the virtual space, which is the HSRC's Virtual Library. Essentially, the HSRC has dedicated research professionals in most of the major city centres in South Africa, namely Pretoria, Cape Town, Durban, Pietermaritzburg and Port Elizabeth. It is the mandate of Information Services at the HSRC to provide pro-actively and reactively for the information needs of these researchers which it serves. Essentially, this is done through a series of electronic, information "hubs" which are nested within a larger virtual information "hub", namely our Virtual Library. The Virtual Library of the HSRC, as an electronic hub, drives the information provision process, assists with research outputs, guides researchers to new and innovative funding opportunities, and ultimately acts as a springboard to the generation of new knowledge, in all the research areas in which the HSRC is active. Ultimately, the questions which remain are the following: How does the Information Services at the HSRC take its already respected service delivery, to the next level? How do we take our information hubs and make them accessible to young researchers who are completely au fait with smart phones, tablets of all kinds and the interconnected digital environment? Our raison d'être is to deliver information to our researchers that ultimately makes a fundamental difference in the policy driven research which the HSRC is actively engaged in. Are we ready for the next leap into making our information hubs even more accessible and researcher-friendly? This paper will examine these topics and ultimately explore new avenues for information delivery, within an African context.

**1) Introduction**

The HSRC's Virtual Library acts as an information hub which supplies its researchers with access to information of a high quality, across five major cities in South Africa. The quality and accessibility of the information cannot be compromised on, as the HSRC's researchers have come to expect 24/7 access 365 days of the year. The need to provide information of a high quality, via access to databases such as Ebscohost, Science Direct, Sage and Springer, to mention only a few, speaks to the need researchers have to deliver on projects which have an impact on a national and regional scale within South Africa and Southern Africa. Needless to say, the HSRC's Information Services, has access to more than 100 databases. When considering the size of the organisation, as measured by the FTE (Full-time equivalent) count as universities do when approaching vendors to purchase their databases, then the added advantage of access to information becomes apparent. With a total staff compliment of 457 people, including researchers, administrative staff and other support staff, the inherent value of access to these databases becomes evident. The HSRC's Information Services also has access to the bargaining power of the national library consortium, namely SANLIC (South African National Library and Information Consortium) which greatly enhances its buying power when approaching vendors of certain databases.

SANLIC adds to the already sound relationships that the HSRC's Information Services has with various database vendors. Therefore, a multi-tiered approach to information provision is key to the success of quality information which can make a difference to the people in South Africa, based on the research the HSRC is engaged in. What do I mean by this multi-tiered approach to information provision? Essentially these are the information and research hubs which I have already discussed, namely the Virtual Library as a hub, the individual research hubs and the entire Information Services as an Information hub. These various multi-tiered hubs act in unison to provide a single, uniformed approach to information delivery and dissemination, and ultimately the generation of new knowledge, which can help South African Society as a whole.

The HSRC has a slogan which reads, "Social Science research that makes a difference". The HSRC's researchers exhibit a driving passion to make this slogan a reality, whether it is in the arena of public health, economics or social development to name only a few areas with which it engages in social issues. This can only happen with a dedicated team of information professionals willing to go the extra mile to deliver accurate and pertinent information where and when needed. The virtual space created by the Virtual Library, has made delivering this information possible. This virtual space acts as an information "hub" which is the central driving factor for access to the quality information already mentioned. It is this information hub, which is the de facto access to the information world in which the HSRC's researchers and information professionals engage daily, either on site at the various centres, or from a remote point. Besides the Virtual Library acting as an information hub, the HSRC's various research centres across South Africa act as research hubs, each working independently on projects, as well as in concert, when needed. This independent research is done on a project to project basis. The idea here, of multiple hubs, tiered across the same organisation, is also analogous of the concept of stackable hubs, as used in computing. In this case, each computing hub acts independently of the other, yet they are connected and perform a single function, that is, information access and provision. To take this analogy further, the Information Services department of the HSRC, therefore, can be seen as a particular hub within the larger research hubs of the organisation, facilitating this very process of information access and provision. Ultimately this entire functional research and information provision hub, the HSRC as a whole, drives the production of new knowledge and facilitates greater insight into the South African social, economic and political reality.

## **2) Information and research hubs as driving factors which act as the springboards to producing new knowledge.**

It is of importance at this point to discuss what exactly a "hub" is, so as to clarify the reasoning for honing in on this concept in context of this paper. A hub is essentially a central point where information flows through, where people at airports flow through to get connecting flights, or information traffic in terms of computing or even the point where the spokes of a wheel meet in the centre of the wheel, adding stability to the wheel. (SearchNetworking: 2013:1) Essentially then it is a meeting point, a central connection point where information is routed through, or people are brought together, both in virtual space or physically as at airport hubs. The term "library as information hub" has been used extensively in the literature in the field of information provision. (Goodman, 2011:399 and Behler and Girven, 2008:1)

This central meeting point as a place of information dissemination, at the HSRC, has been taking place in virtual sphere for more than a decade, and reliance on printed materials of information has gone the same route as most developed world libraries. With regard to the

relentless move away from printed sources of information within the LIS sector, Booth et.al (2012: 32) mention the University of Technology Library in Sydney Australia, and state:

Preparations are currently focussed on implementing enabling technologies which will move up to 80% of the print collection to an automated storage and retrieval system. This will allow the physical library to shift from a space dominated by book storage to a vibrant space for people, and facilitate better integration of physical and digital collections, services and spaces. While underpinned by technology, our new library is about people ...

Increasingly librarians at the HSRC (or Information Specialists as they are known) shepherd researchers in the direction of e-books, e-learning environments such as those produced by Proquest in its Refworks product as well as e-journals which have been available for a long time for most of this switch to the digital environment.

I mention these information accessing and dissemination practices which are commonplace in the developed world, as they are not all that commonplace in an African context. Senior researchers at the HSRC who have worked extensively with colleagues in other parts of Sub-Saharan Africa, have mentioned the dire need for access to quality sources of information in assisting them in being able to make valuable input into the solutions needed to solve the social problems of their own countries. (Frier: 2012: 6) Collaboration across the HSRC to achieve vital goals is facilitated by the Information Hub which is the Virtual Library. Without it, quality research would not take place and the research process would be hobbled.

The HSRC, in terms of being a Social Science research council, is fairly unique in Sub-Saharan Africa. The concept of the HSRC acting as multiple hubs is unique as well, within an African context. Yes, other councils of this nature do exist in the rest of Africa, but they are no-where near as well resourced with access to the kinds of funding which the HSRC can access. This is also true of its Information Services department, which serves the information needs of the HSRC's researchers, and is relatively well resourced in an African context. At the heart of the HSRC's drive to understand social phenomena in Africa and Southern Africa particularly, lies the information hub which is the Virtual Library.

Not only do the Information consultants rely on the electronic environment to assist in the ultimate generation of new knowledge by the HSRC's researchers, they also rely on a dedicated department of information professionals who make the electronic environment a reality, namely the need for excellent cataloguing, e-resourcing of materials and the e-environment in general, interlibrary loans and all that goes along with the a library and information service that functions like a well-oiled machine. Many a time the processes and the lengths which the information professionals go to in delivering the much needed information to the researchers, is taken for granted.

This information hub which is at the centre of all the HSRC does and acts upon, is in line with what Brown (2009:177) calls "human centred tenets of design". The HSRC and the Virtual library it thrives on, cannot but be human centred. If it is to deliver social science which truly makes a difference, then Brown's (2009:177) description of such an organisation is apt:

...an organisation that commits itself to the human-centred tenets of design thinking is practising enlightened self-interest. It does a better job of understanding its customers, it will do a better job of satisfying their needs. This is simply the most reliable source of long-term .... sustainable growth.

The need to discuss these particular concepts here, namely a human-centered approach to information delivery and dissemination, and the need for long-term sustainable growth, is valid within the broader context of describing the information and research hubs as mentioned previously. Organisations as with societies, are in a constant state of flux. In order to survive they need to adapt to their environment, and so has the Virtual Library as the information hub of the HSRC. Booth et. al. (2012: 33) state that they “point here to research into emerging technologies or evidence of changing social, information seeking and learning as [well as research] habits; however [they] take these, the basis of the Web 3.0 as a given.” The HSRC as a whole, and its constituent parts, namely the Information Services, its virtual library and the various research units, need to take cognisance of these changes, change which are taking place in the very society it serves. The young interns who come into the organisation bring fresh ideas and the exposure to new technological advances in ICT and communications technologies which are continually in a state of convergence. These are the Information Services continual new “clients”, and it has to adapt to their needs. “Before describing our vision of our future library, it is worth asking, who are our future clients?” (Booth et.al.: 2012:33)

At an institutional level, the researchers within the HSRC are “clients” of the Information services which Booth et. al. (2012:33) so eloquently describes. Here the notion of stackable hubs and whom these hubs serve, come into clear focus. The research hub of the HSRC, is dependent on its information being gathered from an ever evolving society, one which is already awash with the mobile technological advances they point to. The researchers, as another part of the stackable hub, gathers, filters and digests vast amount of information and data gathered from the various projects it is involved in within the South African social reality. And who are their “clients”? These are the very subjects they wish to study so as to determine social trends, and myriads of funders who finance the projects which keep the HSRC alive as an organisation. What would be the role of the Information specialists in determining the new role of their information delivery systems within their research organisation?

Mobile technology, the use of social networking sites and the concept of “the library without walls, one which never shuts its doors” are all converging to drive the very needs of the researcher of the future. (Booth et. al.; 2012:33). As information specialists serving this prestigious research council, we would ignore these changes in information delivery at our peril. The HSRC’s Information service have already embarked on the route to make its information, i.e. the databases it has access to, its OPAC and the various research and information hubs, accessible to the myriads of mobile technology which have emerged in recent times. Along with this, come the need to exploit social media as another means to deliver quality information.

Scott (2013: 5) mentions that as a researcher, the future only makes sense when social media has been exploited to its fullest extent in delivering quality research outcomes. She states that:

At the heart of social media lies the idea of user-generated content, with the implication that we as users don’t simply absorb online information, but actively contribute to it. As a researcher, I have found social media to be extremely useful in a number of different ways, and has enabled me to both engage people in my research and to get involved in more public discussions. For me, Twitter has been the best medium for these activities.

Although vastly different in information delivery and content, other media also exist, such as Mendeley, Sciverse and Research Gate, to name only a few. These mediums of storing and

sharing information and research are other hubs which deliver on the need researchers have to gather, disseminate and generate new knowledge, and is being embraced by the HSRC's Information Services, if yet tentatively. However, what are the ultimate outcomes of all these new technologies? The HSRC has proven itself to be a game-changer in the area of delivering on its goal of "social science which makes a difference". One example of this, in which its information services facilitates in providing access to reliable and quality information, is in the area of making access to an individual's HIV positive status and CD4 count, readily accessible.

Through various projects in the rural Kwazulu-Natal Midlands, the organisation is actively engaged, not only in research, but also in educating about the AIDS pandemic, as it gathers data. Researchers in the field are also becoming heavily reliant on mobile technologies to access and retrieve vital information so as to bring solutions to pressing social problems, which ultimately improves the quality of life of people suffering from the HIV disease and the vast amount of social ills it brings. The information services of the HSRC needs to keep abreast of technological advances in the mobile information delivery arena, so as to play the vital role it always has, that is, the delivery of information which can and does make a difference at the point of need, across multiple locales nationally and regionally in Southern Africa.

In terms of storage and retrieval of vast amounts of data which is downloaded from its various databases, the need to bring its researchers into using cloud computing, which can be readily accessible via mobile technologies, will be a crucial way forward for the HSRC's Information Services. Although the benefits of cloud computing have been evident for some time, the HSRC as an organisation, and particularly its information services still needs to exploit these benefits for the ultimate success of the projects its clients are engaged in. Cloud computing can be seen as another hub running adjacent to the hubs already discussed. Becker (2011: 58) states the following about cloud computing and its benefits, providing a start-up solution for this means of information storage and accessibility:

For librarians, the shift towards cloud-based computing means that we need to ensure that our heads are in the clouds. For an effortless start, consider creating an account with Google Docs and uploading some of the research guides and handouts you already have stored on your computer. [The HSRC's information services has a number of these, not yet stored in the cloud, used for training at the various research hubs across South Africa] After uploading, you can share or publish these documents to the Web by following Google Docs' simple step to sharing your document. With a little practice, you can use Google Docs to create powerful tools such as online information literacy assessments. The assessment data can be stored securely within your account and can be selectively shared with [researchers at the HSRC]. As librarians, we can also use this data to assist [our researchers in the very need to deliver social science which makes a difference].

Cloud computing as an information dissemination hub, when used in conjunction with mobile technologies, can be a powerful research tool. The convergence of cloud computing, mobile technologies and social networking sites is a concept which has already emerged. All we as information professionals have to do is to use these adequately to our advantage and then allow our researchers to make the various connections and use these new hubs to further their research.

### **3) Research, Teaching and Learning and the question of Hubs: Quo Vadis?**

Having discussed the benefits of the convergence of social networking media, cloud computing and how I see these as information hubs which interact to drive the generation of new knowledge, research, and teaching and learning, the provision of information in all its current forms can only but thrive as a result of this convergence. Libraries, their collections and the physical spaces they occupy and use, are evolving as a result of this convergence as well. However, technological advances have been but one of the important driving factors for how libraries “do their business”. As stated previously, I have relied heavily on the concept of libraries as hubs, both as information hubs and social ones. Within the research council which is the HSRC, research is not the only central driving theme of its operations, although it is its *raison d'être*. A considerable amount of teaching and learning also takes place in this organisation, which is focused on research. Masters' and doctoral interns as well as post-doctoral fellows are taken on board and their learning is a vital part of the research process. Not only do they add a fresh perspective to the organisation, they also add considerable value to the research which takes place. Once again, at the core of this research and teaching and learning, lies the virtual library. Its changing role within the organisation, is echoed by Smith (2011:246) when she states:

Libraries [and virtual ones] are changing from being considered material [and virtual] warehouses to being holistic learning environments. The focus has moved from accommodating individual research and study to providing interactive, flexible spaces and programs for a wide variety of group and individual modes of learning and research. In association with physical changes, academic [and research] libraries are increasingly hubs not only of information literacy related learning, but more broadly of university learning, and of student engagement with their learning journey.

This “university learning” which Smith (2011:246) refers to above, continues unabated when masters', doctoral interns and post-doctoral fellows are brought on board in the HSRC. They may be focused on a particular research project but their learning never ceases. New ideas of approaching social problems being examined, and the innovative processes to solve them, are constantly being nurtured and brought to light. Not only is the library's role in all of this to facilitate the teaching and learning process, but it is also to innovate as it's researchers innovate and adapt, and as they discover new horizons in the social sciences. The HSRC's Information Services or library services, also engages regularly with its researchers so as to foster information literacy education.

This is done via its annual road show, as well as continual education and training sessions with new interns and staff. The information consultants in the HSRC's Information Services facilitate this process, and have aligned themselves with what Smith (2010:246) alludes to above, namely the need to be flexible and innovative in information provision and information literacy related learning. This flexibility extends well beyond classroom type learning, encompassing the virtual world of information provision as well. The need to be innovative, to constantly change and adapt to the needs of consecutive generations of researchers, is crucial for the Information Services' continued *raison d'être*.

The trajectory of change and innovation in the LIS sector, from traditional print-based information provision, to that of information accessed on the move, via mobile technologies, has only begun. The information services of the HSRC, has taken cognisance of this fact and continues to innovate its approach to information delivery. Technological advances in information delivery have not only added to the notion that libraries are virtual information hubs, but have also enhanced the HSRC's role as an effect research hub where new knowledge is generated and disseminated. This research hub, as well as teaching and

learning which takes place at the HSRC, is fuelled by the information which it's virtual library gives access to.

Smith (2011:246) also alludes to "holistic learning environments" and libraries becoming "flexible spaces" in the "research and learning journey". Here I would like to propose that the HSRC's Virtual Library is already a virtual "flexible space" which has been thriving for more than a decade. The task ahead is how to capture and launch this virtual space into the mobile age? This process as stated previously is already underway. The other question which remains to be answered, which lies in the future for the research environment is where does virtual reality, cloud computing and mobile technology intersect, and what is its eventual outcome?

The answer to this lies in more technology to drive information provision, so as to enhance the practices of research, and teaching and learning. Human interaction with computing technology is only a few decades old. Significant advances have already been made in the use of biological material as a source of storage and retrieval of data, in the same way as computers do. This is indeed revolutionary, as reported in the Financial Times (2013: February, 28). However, I digress. Instead of attempting to gaze into a crystal ball for too long, what are the means we currently have in which to deliver information by more accessible means? RSS feeds which have been around for some years now, act as conduits to information accessed from databases, which can be viewed as information hubs which sit outside the domain of the HSRC as a research hub and it's virtual information hub.

Yet the procedure with the HSRC's information services is to sign up for alerts from databases which it subscribes to. This approach may be less helpful than RSS feeds, as it results in researchers being bombarded with vast amounts of seemingly extraneous information, which may not necessarily be accessed (Frier: 2012:6). Once again the central theme of this paper, namely information hubs which feed the research hubs of the HSRC's research environment comes clearly into focus here. Push technologies which provide user driven sources of information based on searching patterns can be aligned with RSS feeds to overcome the problem of information overload. Ovadia (2012:179) discusses the value of RSS feeds, and how it has not truly taken off as a concept:

Really Simple Syndication (RSS) is a term seen all over the Web, from online newspapers to subscription databases. Although the RSS icon, an orange box with curved lines, radiating out of a circle, is ubiquitous online, use of RSS is not. RSS has not caught on with a broad audience, although it is difficult to locate precise usage data. RSS is an interesting way to approach research, with information streams being sent to the user, rather than a user manually pulling in work from disparate sources.

RSS feeds and signing up for alerts are a means by which the information consultants at the HSRC's information hub, accesses and disseminates useful information to researchers who operate in its research hubs across South Africa. These are some of the means by which technology which is currently accessible, makes the vast amount of information available, researcher friendly, and ultimately drives the generation of new knowledge which fuels the HSRC's research agenda to deliver social science which makes a difference. However, RSS feeds as a medium to inform are not readily used, as Ovadia (2012:179) discusses above. Their true value as a means to inform and to make the world of information more accessible to researchers, has yet to be tapped.

At the heart of this means to inform and disseminate information, lies the ability to personalise and customise the interaction which the various research hubs have with the



web and its myriads of information sources and services, whether databases which are subscribed to or the Web as a whole. How do the HSRC's information consultants, therefore, as disseminators of information via its virtual information hub, convey to researchers the need to customise and tailor-make their interaction with a vast array of information sources and services? The only means currently at our disposal, are RSS feeds, alerts to e-journals housed in various databases, regular contact with and understanding of what happens in the HSRC's research hubs as well as the continual training and dissemination of information which is content specific to the needs of a research project and the researcher's individual needs. This is a process and not an end itself. The research hubs referred to and the information hubs which serve them are also not mutually exclusive entities. They feed each other and the flow of information is a dual one.

As a result of this dual nature of the flow of information, as well as the vast array of information currently at the disposal of researchers, which continues to grow exponentially, the need to customise the researchers' interaction with the web becomes even more acute. How do we as information professionals, therefore, personalise our researcher's interaction with the web? How do we draw down meaningful information from this dual nature of the flow of information between researcher and the databases we subscribe to? The answer may lie in continuous personalization of web interaction between the researcher and the information provider, whether it is a virtual information provider or an information consultant.

The concept of the personalised web has been touted by a number of researchers in the LIS environment for some time, but none as recently and as succinctly as Becker (2012:185). In his work he traces a step-by-step account to personalise the Web. The ultimate end-point of Becker's meandering through the past few decades of electronic access to information is a rather feeble attempt to describe the workings of yet another search engine. Although lucidly written, Becker (2012:185) provides his readers with a bit of a damp squib, stating:

Blekko is a new type of search engine that hopes to fulfil the niche of spam-free searching. It aims to increase search engine relevance by blocking spam sites and content farms from appearing in the search results. Blekko's interface borrows heavily heavily from Google, but most of the similarities end there. Blekko is biased towards quality sites and does not rely solely on linking patterns. It uses human input to help determine search results and site reliability. It also gives users the ability to search within a growing collection of vetted sites. Unique to blekko is the ability to customize a search using a slashtag, which acts as a curated filter or perspective to influence a search.

All of this sounds promising in linking researchers, their interns and information professionals, to valuable information which may otherwise have been missed, thereby enhancing the research, and teaching and learning process. However, exactly how distinctive are the results from that of a similarly powerful search engine such as Google; how does relevance and accuracy compare to that of other search engines? The answer lies in customisation of the web and these new hubs.

Ultimately, the answer lies in the convergence of technologies to deliver information where and when needed, so as to attempt to solve the urgent social problems, which the HSRC engages in. Even though I have painted a rather negative picture of Blekko as a search engine in this paper, there are some promising technological approaches which differ from Google. This is particularly true of the slashtag feature which Becker (2012:186) states is the "next stage of internet searching: personalised, customised results." The HSRC's information hubs and portals act as conduits to information which is specific to a particular

research programme, and is ultimately driven by individual researchers. What would evoke considerable interest is the convergence between Blekko, social media sites, information hubs such as the HSRC's Virtual Library and mobile technologies. This is not too far beyond the reach of current technology. Once this type of technology is in place, access to tested and reliable information becomes possible given our researchers' access to mobile devices, ultimately making access to information on demand where and when needed, possible.

#### **4) Social Networking, Information Hubs and Collaboration in Research, Teaching and Learning**

Collaboration in research, and the teaching and learning process, in any organisation globally, will ultimately have to deal with the issue of multiculturalism. The need for research hubs like the HSRC to reflect the diversity of the populations they hope to examine is crucial for their very existence, and no more so than in South Africa. Alexander's work (2013:61) is telling in this regard particularly when he states:

One factor which led to underrepresentation [of certain cultures with regard to printed materials and research] was a difference in power between dominant and minority groups. Library collections built around the scholarship of the dominant cultural group inherently devalued the intellectual accomplishments of the other cultural groups. Library epistemology that developed out of the Western tradition similarly has a limiting influence on cultural diversity and recruitment practices within academic [and research] libraries.

In stating this, Alexander has also outlined the challenges faced by the HSRC as an organisation as well as the information services which serves the information needs of this organisation. A library collection has been built up over the decades which reflects the Southern African reality, but it is my sense, that the cultural bias in the collection which Alexander mentions above, persists.

This is not a factor which can be changed overnight. It will take many decades to correct, with vast amounts of research and academic toil to right any imbalances in any such collection with a western bias. Inherent in this bias is the fact that the library, as a change agent which can reflect the changes that need to come as collections change, can affirm a cultural presence which is not one-sided and focused on a single cultural group. When Booth, et. al (2012: 36) discuss the concept of the library as cultural hub, whether for broader society or for the culture of a research hub, such as the HSRC, they state:

We firmly believe that a stronger and more visible cultural presence in the library will not only provide a deeper context for the knowledge to be found in our collections, but also act as inspiration to drive inquiry, wonder, and imagination. It will also assist in encouraging cross-disciplinary learning and research initiatives and innovation.

A library collection, therefore, which is representative of its clientele's needs, is one which inspires change, drives research to its outer boundaries and inspires imaginative thinking.

However, the core of most library collections has been built up from what has been in print over the decades, with relevance to the research hubs and their needs. Although this western bias plays out daily in the research work of all our researchers, which is a factor of the north-south information divide (Frier: 2012: 6), our researchers have the absorptive capacity to assimilate the information produced in developed countries, and then incorporate the necessary findings into their own work as is required. The work produced and solutions sort by the various research hubs is then transformed to suit the Southern African reality.

In order for the HSRC's researchers to come to grips with the Southern African reality, namely a multicultural, multi-ethnic, multi-racial society, the information services (IS) that serves the various research hubs has to and does have an information collection, both print and electronic, which reflects this social environment it operates in. The HSRC's IS, as an information hub, has gone to great lengths to acquire materials both in print and electronic format that is representative of the Southern African reality. Although there is a strong reliance on western information hubs, whether specific databases or information gained from research councils abroad and their research outputs, the HSRC's research outputs remains focused on the Southern African reality.

Publications in which the HSRC's researchers work is published and cited reflects a growing trend and move toward ISI accredited journals which have an African focus, where possible. The fact that an epistemology biased on western sources of information is still overwhelmingly the norm is simply a reflection of the accredited journals which are available and the paucity of these which are published on Africa, and in Africa, in comparison to those published in the developed world. Collaboration among social science councils and research hubs in the African continent is still focused heavily on the HSRC making scholarly information available to researchers elsewhere in Africa. (Frier: 2012: 8) There is a heavy reliance on e-mailed articles being sent to researchers in the rest of Africa, as they do not have the financial ability to access costly databases, as does the HSRC. As Africa's emerging economies grow, this trend may change in time, with more access to quality information becoming affordable.

## **5) Conclusion**

The need to collaborate in a virtual space as well as working across vast distances in South Africa, from one major city centre to the next, places an onerous burden on staff within the HSRC. This paper has been an attempt to make sense of the manner in which the HSRC's information hub, the virtual library and its Information professionals act in concert with the various other research hubs, as have been defined. The notion of the entire organisation being analogous to the stackable hubs concept used in computing has proven helpful, if also leading to some complexity in examination of the entire process. The fact that information flows across hubs, and is also generated in research hubs, some of which, in the form of a research outputs database, the Information Services has to manage, add complexity to the flow of information, its dissemination and the ideas expressed about the process of research and teaching and learning.

The processes regarding access to information, in all its forms, and how it is accessed have also been discussed. This paper attempts to provide a framework in which there is some understanding of how the complex notion of hubs, stacked upon yet other hubs, both research and information hubs, work in concert to deliver on the central tenet of "Social science which makes a difference". Without the steps being taken to make available the research information held in the HSRC's Information hub, i.e. the virtual library, accessible to mobile devices, a large sector of the HSRC's Information Service's clientele will be ignored or left in a position where they cannot access relevant and reliable information, where and when needed.

Linked to the mobile technology initiative to make information accessible, is the notion of the convergence of cloud computing, social networking and how information is accessed in general. Given the time constraints of the clientele of the HSRC's Information Services, the need to access information on the go, will become even more acute. The only way forward for information professionals, is to embrace the change which the convergence

of technology and information processes make into a new reality, and then to deliver quality information at the point at which it is needed, regardless of where this may be, or when.

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